

AMENDMENTS TO THE SPECIFICATION

Please replace the word DESCRIPTION before the title with the following:

TITLE OF THE INVENTION

Please replace the first full paragraph on page 1 of the specification with the following amended paragraph:

CROSS REFERENCE TO RELATED APPLICATIONS

This application is a 371 of PCT/JP2005/002089, filed February 4, 2005, and claims the priority of application based on U.S. Provisional Application Serial No. 60/543294 (filed on February 11, 2004) and U.S. Provisional Application Serial No.60/543405 (filed on February 11, 2004).

Please replace the words TECHNICAL FIELD on page 1 with the following:

BRIEF SUMMARY OF THE INVENTION

Please replace the words BACKGROUND ART on page 1 with the following:

BACKGROUND OF THE INVENTION

Please replace the words DISCLOSURE OF THE INVENTION on page 5 with the following:

DETAILED DESCRIPTION OF THE INVENTION

Please replace the last full paragraph on page 5 with the following amended paragraph:

An object of the present invention is to provide a method for producing 3-alkoxy-1-propanol and derivatives thereof, which can solve the above-mentioned problems of the prior art.

Please replace the first full paragraph on page 6 with the following amended paragraph:

As a result of earnest study, the present inventors have found that 3-alkoxy-1-propanol can be efficiently produced by reacting using a catalyst containing specific elements in the case of producing 3-alkoxy-1-propanol from an allyl alcohol and an alcohol compound, and thus the present invention has been completed.

Please replace the fifth full paragraph on page 11 with the following amended paragraph:

It is apparent that, in the above-mentioned method for producing 1,3-propanediol, when 3-alkoxy-1-propanol is obtained by the above-mentioned method for producing 3-alkoxy-1-propanol, 3-alkoxy-1-propanol is used as an ether alcohol compound of the general formula (1), as a raw material, 1,3-propanediol having a very small content of a carbonyl compound can be obtained, and a resin with less odor and coloration can be produced at a low cost by using the resulting 1,3-propanediol as a material of a resin such as polyester.

Please replace the second full paragraph on page 12 with the following amended paragraph:

The catalyst used in the method of the present invention (I) is preferably an oxide, hydroxide or alkoxide, ~~of elements, and particularly~~ preferably an oxide, hydroxide or alkoxide of elements of the-group III of the Periodic Table, lanthanoid elements or actinoid elements.

Please replace the first full paragraph on page 14 with the following amended paragraph:

The form of the catalyst used in the method of the present invention (I) is not specifically limited and may be ~~any of in either~~ a homogeneous form ~~and or~~ a heterogeneous form. The catalyst is preferably a heterogeneous catalyst in view of the operation for separation of the catalyst after the completion of the reaction, but may be a homogeneous catalyst.

Please replace the third full paragraph on page 14 with the following amended paragraph:

The homogeneous catalyst may be used ~~for in~~ the reaction in the form of being dissolved previously in substrates such as allyl alcohol and an alcohol compound, or may be used ~~for in~~ the reaction by charging simultaneously with the substrate.

Please replace the paragraph bridging pages 14 and 15 with the following amended paragraph:

When the catalyst used in the method of the present invention (I) is a supported type catalyst comprising a carrier and a catalyst supported on the carrier, usable carrier is not specifically limited as far as it does not react with the component containing at least one element selected from the group consisting of elements of the group III, lanthanoid elements and actinoid

elements of the Periodic Table, and Table. ~~conventionally~~ Conventionally known carriers can be used. ~~A matter of importance required to~~ To exhibit catalytic activity, is that the carrier does must not react with the component containing at least one element selected from the group consisting of elements of the group III, lanthanoid elements and actinoid elements of the Periodic Table under conditions for production of the catalyst, ~~and a~~ A carrier which reacts with the component to form a complex oxide after the completion of the production of the catalyst is not preferable.

Please replace the first full paragraph on page 15 with the following amended paragraph:

As the carrier, for example, activated carbon and magnesia can be used. In view of the influence on the reaction, the specific surface area during the production of the catalyst, or industrial utility, such as strength of the carrier, activated carbon is preferable.

Please replace the first full paragraph on page 20 with the following amended paragraph:

When the amount of the catalyst is less than the above range, sufficient reaction rate suited for practical use may not be obtained. On the other hand, when the amount of the catalyst is more than the above range, a decrease in the reaction yield and an increase in the catalyst cost may be caused by an increase in the side reaction. Both cases are not preferable.

Please replace the first full paragraph on page 21 with the following amended paragraph:

The reaction pressure in the reaction of the allyl alcohol and the alcohol compound in the method for producing 3-alkoxy-1-propanols of the present invention (I) is not specifically limited because it varies depending on the reaction temperature, the kind of the alcohol compound, and the mixing ratio of the allyl alcohol to the alcohol compound. The reaction can be carried out under normal pressure or applied pressure. In case the reaction is carried out at a temperature of higher than ~~a~~the boiling point of either or both of the allyl alcohol and the alcohol compound, the reaction pressure is decided by ~~a~~the vapor pressure of either or both of them and the reaction can be carried out under applied pressure, in addition to the vapor pressure of the substrate, using an inert gas. Similarly, when the reaction is carried out at the temperature at which the vapor pressure is not produced in both the allyl alcohol and the alcohol compound, the reaction can be carried out under applied pressure using an inert gas. To enable the reaction to proceed efficiently, it is preferred to react under applied pressure as compared with ~~the case of reacting~~ under normal pressure.

Please replace the paragraph bridging pages 21 and 22 with the following amended paragraph:

The reaction of the allyl alcohol and the alcohol compound in the method for producing 3-alkoxy-1-propanols of the present invention (I) can be carried out at any temperature as far as the reaction efficiency of the catalyst is not lowered, ~~and the~~ The reaction is usually carried out at a temperature within a range from 100 to 350°C, preferably from 130 to 300°C, and more preferably from 150 to 250°C. When the temperature is lower than 100°C, the reaction rate suited for practical use may not be obtained in the reaction of the allyl alcohol and the alcohol compound, and therefore it is not preferable. On the other hand, when the temperature exceeds

350°C, the isomerization reaction of the allyl alcohol may occur to produce undesired by-products derived from the allyl alcohol, and therefore it is not preferable.

Please replace the first full paragraph on page 22 with the following amended paragraph:

The reaction of the allyl alcohol and the alcohol compound in the method for producing 3-alkoxy-1-propanols of the present invention (I) can be carried out even if water is present, in addition to the allyl alcohol and the alcohol compound. The amount of water used is not specifically limited. Even if a-the ratio of B (number of moles of water present in the reaction system) to A (number of moles of at least one element selected from the group consisting of elements of the group III, lanthanoid elements and actinoid elements of the Periodic Table contained in the catalyst, or total number of moles of plural elements, if any), (B/A), is 1, 5 or more, or 10 or more, the reaction of the allyl alcohol and the alcohol compound in the present invention (I) can be carried out.

Please replace the second full paragraph on page 23 with the following amended paragraph:

According to the above-mentioned method for producing 3-alkoxy-1-propanols of the present invention (I), when 3-methoxy-1-propanol is produced from the allyl alcohol and methanol, a-the conversion ratio of the allyl alcohol is 20% or more under preferable conditions and is 40% or more under more preferable conditions. As described in the after-mentioned-later-mentioned Examples (Table 1), a-the selectivity coefficient of 3-methoxy-1-propanol is 60% or

more under preferable conditions and is 70% or more (particularly preferably 75% or more) under more preferable conditions.

Please replace the paragraph bridging pages 23 and 24 with the following amended paragraph:

Since the method for producing 3-alkoxy-1-propanols of the present invention (I) ~~is a method for producing 3-alkoxy-1-propanols by involves~~ reacting the allyl alcohol with the alcohol compound, the product 3-alkoxy-1-propanols substantially ~~contains~~contain no carbonyl compound as impurities. Therefore, when 3-alkoxy-1-propanols of the present invention (II) are used as a material, 1,3-propanediol substantially containing no carbonyl compound as impurities can be produced. When a polyester is produced by using the resulting 1,3-propanediol, coloration and odor caused by the carbonyl compound can be suppressed.

Please replace the first full paragraph on page 24 with the following amended paragraph:

The following procedures ~~enable to~~ confirm whether or not 3-alkoxy-1-propanols contain the carbonyl compound.

Please replace the paragraph bridging pages 29 and 30 with the following amended paragraph:

Specific examples of the reaction form used in the present invention include, ~~but~~but are not limited to, reaction forms such as simple stirring tank, bubble column type reaction tank and pipe type reaction tank in case of the homogeneous catalyst; and reaction forms such as

suspended bed simple stirring tank, fluidized bed bubble column type reaction tank, fluidized bed pipe type reaction tank, fixed bed liquid phase circulating pipe type reaction tank, fixed bed trickle bed type pipe type reaction tank in case of the heterogeneous catalyst.

Please replace the last full paragraph on page 33 with the following amended paragraph:

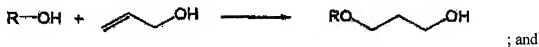
The ether alcohol compound in the method of the present invention (2-I) is preferably 3-alkoxy-1-propanol obtained by the method of reacting an allyl alcohol with an alcohol compound in the presence of a specific catalyst because contamination with industrially undesired impurities, for example, a chlorine compound serving as a poisoning material of the reaction catalyst and a carbonyl compound capable of producing by-products, is prevented during the reaction.

Please replace the paragraph bridging pages 33 and 34 with the following amended paragraph:

According to the above-mentioned method for producing 1,3-propanediol of the present invention (2-I), when 1,3-propanediol is produced by hydrolyzing 3-methoxy-1-propanol, ~~a~~the conversion ratio of 3-methoxy-1-propanol is 50% or more under preferable conditions and is 70% or more under more preferable conditions. A selectivity coefficient of 1,3-propanediol is 60% or more under preferable conditions and is 70% or more (particularly preferably 75% or more) under more preferable conditions.

Please delete the present Abstract of the Disclosure, and add the following new Abstract of the Disclosure:

The present invention reacts an allyl alcohol with an alcohol compound in the presence of a catalyst containing at least one element selected from the group consisting of elements of the group III, lanthanoid elements and actinoid elements of the Periodic Table, as depicted in the following reaction



provides a method for efficiently producing 3-alkoxy-1-propanol in a single step using an alcohol as a starting material.